

Self-Medication in Common Cold: Practices and Perception of Medical under Graduates

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Abstract

Background: Self-medication is a global phenomenon. Several studies have been conducted worldwide to study it in general population as well as students. There is paucity of literature on such studies in medical students and even rarer is to find a study focussing self-medication practices in a particular disease. **Aim:** This study was undertaken to acknowledge practices of self-medication with regard to common cold among medical undergraduates and their attitude about it in general. **Methods:** This survey was conducted in a medical college, involving medical undergraduates of 2nd and 3rd year. It was a questionnaire based study, executed via online survey after ethical approval. Total 14 questions including demographic profile, practice of self-medication in common cold and perception regarding self-medication were asked. Results were analysed and expressed in counts and percentages. **Results:** Total 109 students (62.29 %) had practiced self-medication in common cold. The prevalence was marginally higher in 3rd year students (n= 58 out of 93, 62.37%). It was seen more in male students (65.82% v/s 59.38%). Antihistaminic use was seen in 81 (74.31% of those who self-medicated) with levocetirizine preference (n=51, 62.96%). Most common reason for self-medication was 'minor illness', quoted by 79 (57.66%), followed by 'I have good knowledge', cited by 26 (18.98%). Friends/family were (n=50, 36.5%) were the most opted source of self-medication, books were next in order (n=43, 31.39%). About 95 (54.29%) claimed that 'self-medication had no adverse effect'. About 48.57% (n=85) believed 'prevention of supply of medicines without prescription' could prevent the growing trend of self-medication. **Conclusion:** There is high prevalence (62.29 %) of self-medication for cold among medical students. The propensity to self-medicate increases with progressive year of study. Though they usually self-medicate for minor illness but about 18.98% (n=26), believe that they have sufficient knowledge to prescribe drugs to themselves. This attitude needs to be curtailed as it may prove hazardous to them and society. Another point of concern is the belief of quite a large percentage of them that self-medication has no adverse outcome. They need to be taught about both the pros and cons of self-medication.

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INTRODUCTION

Self-medication can be defined as the use of a product to treat or prevent a self-diagnosed symptom/disease without medical consultation or prescription. It is a prevalent worldwide health problem.^[1-4] A study conducted in USA in 2008 reported prevalence of self-medication to be 42% and that 4% were potentially at risk of having major drug-drug interaction.^[5] A meta-analysis of 17 studies with 10,248 participants in India in 2020 revealed self-medication prevalence to be 53.57 %.^[6]

It is a double edged sword. Sometimes it can be beneficial as it decreases workload on already overburdened healthcare. At the same time, it can turn harmful, if used indiscriminately.^[7] Self-medication practices contribute to various adverse consequences such as drug interactions, serious side-effects, drug resistance, delayed diagnosis, irrational drug use, increase in direct and indirect medical costs.^[8]

Several studies have been conducted to investigate predictors for self-medication. A study in Iran quoted 'minor ailment' to be a reason—"... When the problem is mild, you do not need to visit the doctor. For example, cold, headache, and knee pain are not serious illnesses and I can apply self-treatment ...".^[9] A meta-analysis in India also reported 'minor ailment' to be a major reason. They concluded that 'factors such as self-knowledge, confidence in diagnosing disease and

familiarity with the medication were considered as the predictors of self-medication practice in India'.^[6] In their study, Loyola Filho AI et al published - "... Getting medication from a pharmacy is far easier than going to the doctor ...".^[10] A study in China, has emphasised that friends are the common source- "... I heard from my friends about the drug. They said that the drug was good for the disease. I also used the drug ...".^[11]

Pharmacology as a subject is introduced in 2nd year and henceforth clinical exposure is also gained in following years. The behaviour of medical students towards self-medication is of importance. They have easier access to drugs also. A study conducted at All India Institute of Medical Sciences, New Delhi found that self-medication is high among undergraduate medical and paramedical students in India and it increases with medical knowledge.^[12] And since medical undergraduates are still in the process of learning medicine, they should understand the pros and cons of self-medication.

Several studies have been conducted to evaluate patterns of self-medication among medical students.^[12-31] But they are in general and not about particular disease. This study was conducted to study self-medication patterns among medical undergraduates regarding a common ENT disease - common cold. As the author has experienced this to be a common entity for inappropriate

self-medication, so we went ahead with this disease.

MATERIALS AND METHODS

This cross sectional, questionnaire based study was conducted in a private medical college in October 2020. The permission was taken from institutional ethical committee prior to commencement of the study. The sample consisted of 2nd and 3rd year medical undergraduates, who were to fill questionnaire online and send their consent via email. For the purpose of study, self-medication was considered when they took medicines without consultation of a doctor. Symptoms of running nose/nasal stuffiness or blockade/with or without malaise were considered as common cold. It was 14 set questionnaire- 2 questions regarding their gender and professional year, 8 regarding practice of self-medication in common cold and 4 on their perception towards it. Data was analysed and results were expressed as counts and percentage.

RESULTS

Total 300 students were enrolled in the study (150 per batch) but only 175 students participated in the study. Out of the responses received, 109 (62.29%) had self-medicated. Prevalence of self-medication was slightly higher in 3rd year students (n=58, 62.37% v/s n=51, 62.20%) [Table 1]. Higher percentage of male students practiced self-medication (n=52/79, 65.82% v/s n=57/96, 59.38%) [Table 2].

Table 1: Self-medication according to year (N=175)

Year	Yes (%)	No (%)	Total
2nd	51 (62.20%)	31 (37.8%)	82
3rd	58 (62.37%)	35 (37.63%)	93
Total	109	66	175

Table 2: Self-medication according to gender (N=175)

Gender	Yes (%)	No (%)	Total
Male	52 (65.82%)	27 (34.18%)	79
Female	57 (59.38%)	39 (40.63%)	96
Total	109	66	175

Antihistaminic was consumed by 81 students (74.31% of who self-medicated) with preferred being levocetirizine (n=51, 62.96%) [Table 3]. Almost all students (n= 106) knew side effects of antihistaminic.

Table 3: Antihistamine preference for self-medication (N=81)

Antihistaminic	No. of students who consumed	Percentage
Cetirizine	30	37.04%
Levocetirizine	51	62.96%
Total	81	100%

Nasal decongestant drops were used by 37 students (33.94% of those who self-medicated), others (n=38) used it on prescription, making a total of 75 students who instilled nasal drops. Majority (n=36, 48%) used it for 3 - 5 days [Table 4]. More than half of them

(n= 91, 52%) admitted having knowledge of rhinitis medicamentosa.

Table 4: Duration of use of decongestant nasal drop (N=75)

Days nasal drops used	No. of students	Percentage
<3 days	29	38.67%
3-5 days	36	48%
>5 days	10	13.33%
Total	75	100%

Their attitude towards self-medication as a whole were judged by questions such as - why do you practice self-medication, source of self-medication for you and it's probable adverse outcomes and possible measures to prevent it. Only 38 students had yet not practiced self-medication for any cause. Majority practised self-medication in minor illness (n= 79, 57.66%), 'having good knowledge' was next most common reason cited by them in support (n=26, 18.98%) [Figure 1]

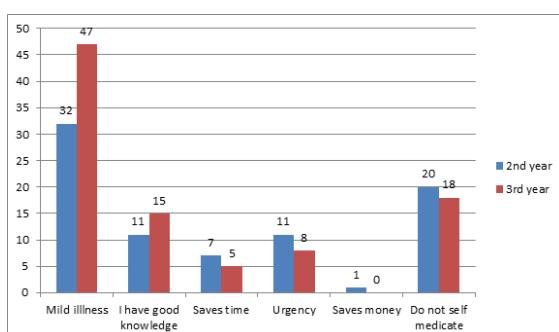


Figure 1: Reason for self-medication

Friends/ family (n=50, 36.5%) were cited as the most common source for self-medication by the students, followed by books (n=43, 31.39 %). [Figure 2]

'Self-medication has no adverse outcome'- was the admitted by 95 (54.29%) students. About 31.43% (n=55) believed side effects were usually encountered with self-medication.

Their suggestions to minimize self-medication in general were also asked, to which 85 students (48.57%) confided that 'preventing supply of medication without prescription' could curb self-medication practices. About 29.71 % (n=52) believed 'working towards making healthcare facilities easily available' could help solve this issue [Figure 3].

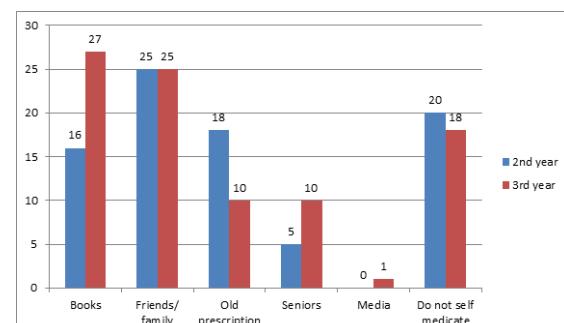


Figure 2: Source of self-medication (N=175)

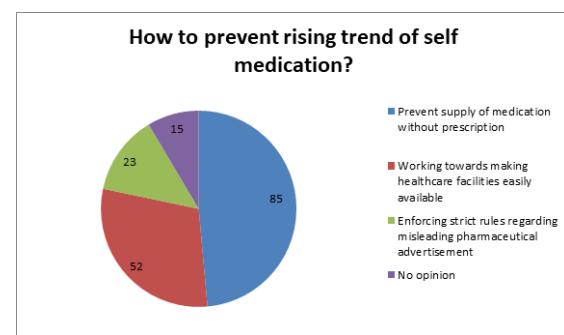


Figure 3: Preventive measures

DISCUSSION

In our study, overall prevalence of self-medication in cold was 62.29%. Various studies have found cold to be the most common or 2nd cause for self-medication - Sunitha M et al (29%), Bhatiya MK et al (49.8%), Pal J et al (74.8%), Zardosht M et al (95.4%), Sundararajan A et al (80.4%), Nirmal TP et al (40.4%).^[13-18]

Practice of self-medication was seen to be higher in male students (65.82% v/s 59.38%). This is in contrast to most studies where female students outnumbered males with regard to self-medication habits. Female predominance was reported by Bartwal J et al,^[19] Bhatiya MK et al,^[14] Banerjee I et al,^[20] Kumar N et al,^[21] Pandya RN et al,^[22] Sunitha M et al,^[13] and Sundararajan A et al.^[17] The reason of this discrepancy may be the fact that all other studies have not restricted indication to one entity as ours, rather have included an array of symptoms. Most likely, menstruation related issues may be a reason which led to higher percentage of females self-medicating.

In our study, the prevalence increased with professional year. Similar results were obtained in study done in AIIMS, New Delhi.^[12] It is self-explanatory as 3rd year students have more theoretical as well as practical knowledge about diseases and drugs as compared to 2nd year students which probably imbues in them confidence about self-medication.

While studying perception of students towards self-medication, questions like reason for self-medication, source and methods to prevent the growing trend were asked. Minor illness was quoted as the most common reason for self-medication (n=79/137, 57.66%). This is in congruence with the studies by Suthar J et al,^[23] Bartwal J et al,^[19] Pal J et al,^[15] Mehta RJ et al,^[24] Banerjee I et al,^[20] Sunitha M et al,^[13] Shehnaaz SI et al,^[25] Biswas AK et al,^[26] Sundararajan A et al,^[17] and Girish HO et al.^[27] All the above mentioned studies had 'minor illness' as the more common reason cited for self-medication. 'Having good knowledge' was next common (n=26/137, 18.98%). Bhatiya MK and Pal J also found it to be 2nd common reason.^[14,15] Zardosht M et al found it to be most common cause.^[16] Whereas, some studies published 'previous experience with illness' as the most common reason (Bhatiya MK et al, Kumar N et al) and for Nirmal TP et al it was 'convenience'.^[14,21,18]

Friends/ family (n=50, 36.5%) were cited as the most common source for self-medication by the students, followed by books (n=43, 31.39%). If we look individually, books were the most common source for 3rd year students and family/friends for 2nd year. Pal J et al reported books to be preferred source.^[15] Most of the studies had 'old prescription' as the most opted source - Suthar J et al,^[23] Bartwal J et al,^[19] Kumar N et al,^[21] Haroun MF et al,^[28] Kumari R et al,^[29] and Bhatiya MK et al.^[14] Joshi DK et al reported family to be most common source.^[30]

When enquired about their suggestions regarding measures to decrease the growing trend of self-medication, 48.57% confided that it can be done by 'preventing supply of medication without prescription'. It is in congruence with studies by Patil SB et al and Kumar N et al.^[31,21]

CONCLUSION

There is high prevalence of self-medication among our medical undergraduates for common cold. It increases with professional year. Presence of 'minor ailment' along with knowledge from friends and text books facilitates self-medication practices. Though 'minor illness' is an acceptable reason for self-medication, it should be borne in mind that even trivial looking disease must be confirmed by specialist for the same and such minor diseases are mostly target of inappropriate self-medication. It is good to have confidence about one's knowledge but sometimes it can be harmful also. Majority admitted that self-medication has 'no adverse effects', which is worrisome.

Limitations of the study

Our study has its limitations such as absence of comparative group, small sample size, lack of interventions (providing information about hazards of self medication). Inclusion of self medication practices of past 1 year can lead to recall bias also. Moreover, there exists limitation of online survey like

probability of misinterpretation of questions.

Majority of the students believed that 'preventing supply of medication without prescription' can help to curb this problem. Widespread educational awareness and strict implementation by regulatory authorities is the need of the hour.

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